GOODWE

ES G2 Series

3-6kW I Single Phase I 2 MPPTs Hybrid inverter (LV)

The GoodWe ES G2 inverter is a single-phase hybrid inverter designed to increase self-consumption of generated solar energy, with the ability to control the flow of energy intelligently. The inverter has the functionality of providing backup modes with quick switching time in less than 10ms, that can cover heavy loads such as air conditioning. Its smart design also supports parallel connection for a dependable backup power supply. Installation is also easier and quicker thanks to a compact, lightweight design, with plug and play connection. The ES G2 is compatible with a wide range of low voltage batteries such as the GoodWe Lynx Home U Series battery. The ES G2 is the ideal inverter for homeowners looking to achieve a high degree of energy autonomy, reliable power supply, and lower energy bills.

Smart Control & Monitoring

- Smart load control with dry contacts
- Smart home integration with multi-protocol communications

Friendly & Thoughtful Design

- Plug & Play
- Elegant and compact design

Superb Safety & Reliability

- Optional AFCI on DC side[1]
- Remote Shutdown

Flexible & Adaptable Applications

- Maximum 16A DC input current per string and high-power module compatibility
- Strong backup power supply

1: Optional functions or devices are purchased separately.

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Technical Data	GW3000-ES-20	GW3600-ES-20	GW3600M-ES-20	GW5000-ES-20	GW5000M-ES-20	GW6000-ES-20	GW6000M-ES-20
Battery Input Data							
Battery Type*1	Li-Ion / Lead-acid	Li-Ion / Lead-acid	Li-Ion	Li-Ion / Lead-acid	Li-Ion	Li-Ion / Lead-acid	Li-Ion
Nominal Battery Voltage (V)	48						
Battery Voltage Range (V)	40 ~ 60						
Max. Continuous Charging Current (A)*1	60	75	60	120	60	120	60
Max. Continuous Discharging Current (A)*1	60	75	60	120	60	120	60
Max. Charging Power (W)*1	3000	3600	3000	5000	3000	6000	3000
Max. Discharging Power (W)	3200	3900	3200	5300	3200	6300	3200
PV String Input Data							
Max. Input Power (W)*2	6000	7200	7200	10000	10000	12000	12000
Max. Input Voltage (V)	600						
MPPT Operating Voltage Range (V)**	60 ~ 550						
Start-up Voltage (V)	58						
Nominal Input Voltage (V)	360						
Max. Input Current per MPPT (A)	16						
Max. Short Circuit Current per MPPT (A)	23						
Number of MPP Trackers	1	2	2	2	2	2	2
Number of Strings per MPPT	1						
AC Output Data (On-grid)							
Nominal Apparent Power Output to Utility Grid (VA)	3000	3680	3680	5000*3	5000*3	6000*3	6000*3
Max. Apparent Power Output to Utility Grid (VA)	3000	3680	3680	5000*3	5000*3	6000*3	6000*3
Max. Apparent Power from Utility Grid (VA)	6000	7360	3680	10000	5000	10000	6000
Nominal Output Voltage (V)	220 / 230 / 240						
Output Voltage Range (V)	170 ~ 280						
Nominal AC Grid Frequency (Hz)	50 / 60						
Max. AC Current Output to Utility Grid (A)	13.6	16.7	16.7	22.7	22.7	27.3	27.3
Max. AC Current From Utility Grid (A)	27.3	33.5	16.7	43.5	22.7	43.5	27.3
Nominal Output Current (A)	13.0	16.0	16.0	21.7	21.7	26.1	26.1
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)						
Max. Total Harmonic Distortion	<3%						
AC Output Data (Back-up)							
Back-up Nominal Apparent Power (VA)	3000	3680	3680	5000	5000	6000	6000
Max. Output Apparent Power (VA)	3000 (6000@10sec)	3680 (7360@10sec)	3680	5000 (10000@10sec)	5000	6000 (10000@10sec)	6000
Max. Output Current (A)	13.6	16.7	16.7	22.7	22.7	27.3	27.3
Nominal Output Voltage (V)	220 / 230 / 240						
Nominal Output Frequency (Hz)	50 / 60						
Output THDv (@Linear Load)	<3%						
Efficiency							
Max. Efficiency	97.6%						
European Efficiency	96.7%						
Max. Battery to AC Efficiency	95.5%						
MPPT Efficiency	99.9%						
Protection							
PV String Current Monitoring	Integrated						
PV Insulation Resistance Detection	Integrated						
Residual Current Monitoring	Integrated						
PV Reverse Polarity Protection	Integrated						
Anti-islanding Protection	Integrated						
AC Overcurrent Protection	Integrated						
AC Short Circuit Protection	Integrated						
AC Overvoltage Protection	Integrated						
DC Switch	Integrated						
DC Surge Protection	Type II						
AC Surge Protection	Type III						
AFCI	Optional						
Remote Shutdown	Integrated						
General Data							
Operating Temperature Range (°C)	-25 ~ +60						
Relative Humidity	0 ~ 95%						
Max. Operating Altitude (m)	3000 (>2000 Derating)						
Cooling Method	Natural Convection						
Display	LED, WLAN + APP						
Communication with BMS	CAN						
Communication with Meter	RS485						
Communication with Portal	WiFi / WiFi + LAN / 4G						
Weight (kg)	19.6	20.8	20.0	21.5	20.0	21.5	20.0
Dimension (W × H × D mm)	505.9 × 434.9 × 154.8						
Topology	Non-isolated						
Self-consumption at Night (W)	<10						
Ingress Protection Rating	IP65						
Mounting Method	Wall Mounted						
Country of Manufacture	China						

*1: The actual charge and discharge current / power also depends on the battery.
*2: The max power is the actual power of PV.
*3: 4600 for VDE-AR-N4105 & NRS 097-2-1.

*: Please visit GoodWe website for the latest certificates.
*: All pictures shown are for reference only. Actual appearance may vary.
**: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.